Water Resources Board Meeting
August 29, 2016
1:00 PM EDT
Training Room C
300 Sower Blvd
Frankfort, Kentucky 40601

1. Call Meeting to Order and Roll Call of Board Members

2. Introduction of Guests

3. Approve Minutes of July 27, 2016

4. Presentation by Bill Caldwell, KDOW – Water Use in Kentucky

5. Presentation by Pete Cinotto, Assistand Director KY-IN Science Center, USGS – Monitoring Kentucky's Water Resources

6. Presentation by Dr. Stuart Foster, State Climatologist, Kentucky Climate Center WKU – Monitoring Kentucky's Climate: The Kentucky Mesonet

7. Action Items and Reports
   a. Projects Workgroup Report

8. Open Discussion for Board Members

9. Public Comment Period

10. Next Meeting 1:00 PM – September 29, 2016

Water Resources Board Meeting
300 Sower Blvd, Frankfort, KY 40601
August 29, 2016
PUBLIC SIGN-IN SHEET

Name	Agency/Organization	Email Address	Phone number
Steve Coleman	KFBF	soi11951@yahoo.com	502-330-5044
Earl Brack	Judge Executive	brackjudge@windstream.net	606-402-1533
John Dix	KRWA	JOHND@WARRENWATER.COM	270-495-3491
Nancy Cox	UK Ag	ncox@uky.edu	859-230-7759
BRENT BURCHETT	KY DEPT of Ag	brent.burchett@ky.gov	502-226-0517
Paulette. Akers	Ky DCA	Paulette.Akers@ky.gov	502-782-6300
Haley McCoy	EEC	haley.mccoy@ky.gov	502-229-5527

Water Resources Board Meeting
300 Sower Blvd, Frankfort, KY 40601
August 29, 2016
PUBLIC SIGN-IN SHEET

Name	Agency/Organization	Email Address	Phone number
Aaron Keatley	DEP	aaron.keatley@ky.gov	564-2150
Bruce Scott	EEC	Bruce.Scott@ky.gov	782-6760
Lowell Atchley	LRC	lowell.atchley@lrc.ky.gov	564-8100 x469
Pete Cinotto	USGS	PCinotto@usgs.gov	502 493 1930
Jeff Woods	USGS	jwoods@usgs.gov	317-600-2762
Annette DuPont-Ewing	KMUA	adeKmua@gmail.com	502 223-2063
Jim Kipp	KWRRI	KIPP@UKY.EDU	859-257-1832
Stuart Foster	Ky Climate Center	stuart.foster@wku.edu	270-745-5983
Gary Larimore	Ky Rural Water Assn	g.larimore@krwa.org	270-843-2291
Bill Caldwell	DOW	bill.caldwell@ky.gov	502-782-6906
Samantha Kaiser	DOW	Samantha.Kaiser@ky.gov	502-782-6995

Water Resources Board Meeting
300 Sower Blvd, Frankfort, KY 40601
August 29, 2016
BOARD MEMBER SIGN-IN SHEET

Name	Agency/Organization	Email Address	Phone number
Kevin Jeffries	KACD	KevinJeFF@bellsouth.net	502-553-2938
Brent Burchett	KY Dept. of Ag	brent.burchett@ky.gov	502-782-4126
Nancy Cox	UK Ag	ncox@uky.edu	859-257-4772
Steve Coleman	KFBF	soil1951@yahoo.com	502-330-5044
Kevin Rogers	KY Chamber of Comm	kevin.rogers@AMWATER.COM	859-268-6324

Water Resources Board
Meeting Minutes
July 27, 2016

Board Members in Attendance: Carl Breeding (Proxy, Dinsmore and Shohl); Brett Burchett (Proxy, Dept. of Agriculture); Earl Bush (County Judge Executives); Bill Caldwell (KDOW); Steve Coleman (KY Farm Bureau); Dr. Nancy Cox (UK); John Dix (KRWA); Kevin Jeffries (Soil and Water Conservation Districts); Justin Sensabaugh (KY American Water); Charles Snavely (EEC Secretary); Ryan Quarles (Commissioner Dept. of Agriculture); Dr. Steve Workman (Proxy, UK)

Board Members Absent: Jared Carpenter (LRC); Lloyd Cress, Jr. (KY League of Cities); Tom McKee (LRC); Kevin Rogers (KY Chamber of Commerce)

Others in Attendance: Adam Andrew; David Beck (KY Farm Bureau); Peter Goodmann (DOW); Mark Haney (KY Farm Bureau); Jeff Harper (KY Farm Bureau); Samantha Kaiser (KDOW); Aaron Keatley (Commissioner DEP); Gary Larimore (KRWA); Haley McCoy (EEC); Bruce Scott (Deputy Secretary EEC)

The meeting began at 1:10 p.m.

Welcome and Introductions

The meeting was called to order by EEC Secretary and Board Chair Charles Snavely who welcomed and reviewed the purpose for forming the Water Resources Board.

Introductions were made by each person in attendance.

Ryan Quarles, explained the importance of Kentucky of being proactive in agricultural water resources. Water is an important factor in the agricultural development of Kentucky. He explained that water tables are affected by human consumption, agriculture, and farming, and that ther needs to be an open line of communication with the agricultural community.

Mark Haney, spoke about Kentucky's increasing population and how access to water could be a future issue for Kentuckians. Other states are also taking a proactive approach; Kentucky will be in the forefront.

Peter Goodmann, discussed that all Water Resources Board meetings are public meetings. Prior to each meeting a public notice will be posted and all information presented will be made available to the public. The Board will need to discuss if public comments will be allowed during meetings.

Background on Water Resources Board and H.B. 529

Mr. Goodmann discussed KRS 151.110, the water resources policy and the duties of the cabinet, and 151.112, the planning process for management and development of the Commonwealth's water resources. KRS 151.113 was developed to create the Kentucky Water Resource Board to assist the cabinet in implementation of KRS 151.110 and KRS 151.112. He discussed the duties of board as listed in KRS 151.113.

Mr. Goodman discussed how the future of agriculture will be different from the present agriculture, and that in order to have more resilient sustainable agriculture Kentucky must plan, learn, adapt, and create

tools for the agricultural community. Kentucky needs to focus on drought topics and the state drought plan needs to better serve the agricultural community. Kentucky's water resources need to be assessed, specifically related to surplus deficits and how severe droughts could affect livestock. Identification of localized issues and how to better manage these issues should be discussed. The growth of Kentucky's economy could depend on the limitations of access to water in rural areas of the state. The current exponential growth of livestock farms in Kentucky and the need for water storage could be another factor that limits the state's economic growth and should be a future topic of discussion. He suggested having regional meetings throughout Kentucky so the agricultural community's needs and concerns can be addressed and brought to Board meetings for discussion.

Steve Coleman, gave a presentation on the Water Management Working Group (WMWG), which is facilitated by the Kentucky Farm Bureau. This working group has collected data, reviewed policies, and developed recommendations that will enhance the quality and quantity of water resources. The work group has identified several areas of interest that could help develop, protect, and enhance Kentucky's water resources. All data[1], information collected, and working group meetings are made available online at www.kyfb.com/water.

The difference between the WMWG and the Water Resources Board was discussed. The Water Resources Board was created by statute as a matter of public policy, so the WMWG will work in collaboration with the Board to help develop, protect, and enhance Kentucky's water resources. The WMWG has been working on agricultural issues and can make recommendations to the Board on areas of interest that could help achieve both groups' goals.

Areas of interest for the future direction of the Water Resources Board were discussed. The Board needs to identify what water resources are available in Kentucky; the acquisition of data for water use, trends, and projections; the weather and climate history of Kentucky, the cycles and roles these have on water resources, and how the information can be used for future predictability.

The Board discussed several areas of interest for future discussions. Identifying the water resources of each county could be a baseline for the resources that are currently available in Kentucky. The use of Mesonet systems across Kentucky has allowed more data to be collected. Investing in more Mesonet systems could allow data collection in areas where gaps in knowledge currently exist. The Board discussed an interest in identifying monitoring gaps and requesting additional funding for this project.

Regulatory restrictions play a major role in the improvement of water resources. The Board showed interest in inviting Colonel Christopher Beck of the Army Corps of Engineers to give a presentation, and inviting a representative from the Corps to be in regular attendance at future meetings. Having a view from the federal level would provide valuable insight to the Board for making recommendations.

Future Meeting Dates and Agenda Topics

With the impending deadline of grants approaching, the Board discussed meeting frequently over the next six to eight weeks. Frequent meetings will allow the Board to propose project ideas and submit grants for funding projects. A Doodle poll will be created to determine the date for the next meeting.

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[1] Kentucky Farm Bureau has made available a comprehensive collection of presentations and other pertinent information that has been presented to the KFB Water Management Working Group. Please visit www.kyfb.com/federation/water/resources/ to learn more about some of the issues of interest to the Water Resources Board.

Due to the size of the Water Resources Board, it was recommended that a subgroup of four member be formed to make recommendations to the board for project ideas, Mr. Steve Coleman and Mr. Brett Burchett showed interest in serving on the subgroup.

The board asked the WMWG to report data and presentations that would be useful for the Board to review. The Board will be mindful not to duplicate projects that the WMWG is currently working on.

A draft agenda will be distributed for comment prior to the next meeting.

The meeting adjourned at 2:35 p.m.

A tour of the 300 Building was optional.

Kentucky Water Resources Board
Draft Ground Rules
Updated 7-27-2016

1. Water Resources Board Governance:
    a. The Kentucky Water Resources Board consists of eleven (11), including three (3) *ex officio* members and six (6) members appointed by the Governor, and two (2) non-voting liaisons who are members of the General Assembly.
    b. The Secretary of the EEC shall serve as Chair and will run the meetings. In the absence of the Chair, the Chair may appoint a proxy.
    c. A quorum is established by attendance in person by at least 6 members (KRS 151.113 (5) (b).
    d. Water Resources Board members may conference and communicate in meetings by phone, but will not be able to vote by phone.
    e. Meeting notice, draft agenda and draft minutes will be delivered to group members at last 2 business days in advance of the meeting
    f. Public meeting notice will be made by Energy and Environmental Cabinet at least 24 hours in advance of meetings
    g. Water Resources Board meetings will be open and accessible to the public and Workgroup meeting materials are subject to the Kentucky Open Records Act (KORA).
    h. Minutes of the Water Resources Board meetings will be kept and made available to the public after acceptance by the Water Resources Board.
    i. The Water Resources Board may establish sub-groups for the purpose of gathering information and educating board members; subject matter experts or other resources may be identified by the Workgroup to assist with sub-group activities; sub-group meetings of less than a quorum will not be subject to open meetings requirements.
    j. Copies of all printed materials presented at the Water Resources Board meetings will be made available to the public at the meetings

2. Workgroup members will:
    a. Make effort to attend majority of meetings.
    b. Let the Chair know at least 24 hours in advance if he/she cannot attend the meeting
    c. Come prepared to meetings, listen attentively and limit side conversations
    d. Actively participate and respect the input of others during meetings
    e. Actively work towards consensus for the benefit of public health and safety
    f. Be assigned to one or more sub-committees
    g. Silence their phones during the meetings, and excuse themself from the meeting if they must make or take a phone call.

3. Decision making and recommendations of the workgroup:
    a. The minutes and agenda will be reviewed and approved at the beginning of each Water Resources Board meeting
    b. Chair will work to gain consensus of all Water Resources Board members for recommendations and action items.
    c. Decisions and final recommendations of the Water Resources Board must be approved by a simple majority of Water Resources Board members in attendance at the meetings.
    d. Decisions, recommendations and action items will be recorded in the minutes.

4. Workgroup Attendees (guests, media, liaison, resources, presenters))

a. Water Resources Board attendees must silence their phones during the meetings, and excuse themselves from the meeting if they must make or take a phone call.
b. At the discretion of the chair, the meeting may have a comment period when the public/attendees may address the workgroup.
c. The Chair may call for input from liaisons, resources or presenters during the course of the meeting.

5. After adoption, Water Resources Board Ground Rules may be amended by a majority vote of the Water Resources Board members in attendance at any meeting of the Water Resources Board.

KENTUCKY WATER RESOURCES BOARD
PROJECTS SUBCOMMITTEE - INITIAL CONCEPTS

1) MESONET (SOIL MOISTURE AND CLIMATE) – (3 Years) - WESTERN KENTUCKY UNIVERISTY - ($824,000 - Matching Funds – TSA, WKU, and Local Gov. & Private)

   a. Acquisition and installation of soil moisture probes (50 new sites) **$275,000**

   b. Install 12 NEW basic MESONET Stations (EXCLUDING SOIL PROBES) with a cost estimate cost of $20,750 each, including equipment, material, and installation costs. **$249,000**

   c. Expand capacity of the MESONET SCIENTIFIC INSTRUMENT CALIBRATION FACILITY **$100,000**

   d. EXPAND THE SUITE OF INSTRUMENTATION AT 40 MESONET STATIONS **$200,000**

2) DATA MANAGEMENT AND INTEGRATION – US GEOLOGICAL SURVEY - ($34,000 - Matching Funds – TSA & USGS)

   a. **$28,000** to design and implement a data integration and management portal centered on water-use and drought-related data. USGS will provide $12,000 CWP funding as match (total project cost is $40,000). Note also that there are nominal annual operation and maintenance cost associated with maintaining a dynamic web page and these are detailed below ($3,000 per year).

3) Funding for updating and adding agriculture concerns to Kentucky Drought Mitigation Plan. Development of NOAA Drought Early Warning System for Kentucky. –($25,000 - Matching Funds – TSA, NOAA, and State Gov.)

4) SURFACE WATER (STREAMFLOW) – (3 Years) - US GEOLOGICAL SURVEY - ($468,500 - Matching Funds – TSA, USGS, and State Gov.)

   a. 5 Gages (installation, equipment, and operation costs) total within 22 counties with a cost estimated cost of $26,000 each one time cost and O&M $14,000 each annually. **$272,500**

   b. **$98,000** for construction of a new water-quality monitoring station on the Salt River at the confluence with the Ohio (this cost includes supporting sampling and laboratory analyses). The Salt River site has been identified as being of importance to KY Agriculture as it quantifies the nutrient loads from a large urban area and places the primary agricultural basins into context. USGS will provide $42,000 CWP funding as match (total project cost is $140,000 in year one).

   c. **$98,000** for construction of a new water-quality monitoring station on the Kentucky River at the confluence with the Ohio (this cost includes supporting sampling and laboratory analyses). The Kentucky River site has been identified as being of importance to KY Agriculture as it quantifies the nutrient loads from a large portion of the Commonwealth and also places the primary agricultural basins into context. USGS will provide $42,000 CWP funding as match (total project cost is $140,000 in year one).

5) GROUNDWATER – (3 Years) - KENTUCKY GEOLOGICAL SURVEY - ($366,000 - Matching Funds – TSA, USGS, KGS, and State Gov.)

   a. Drill 10 NEW observation wells in critical areas **$118,000**

   b. Upgrade 15 existing wells with real-time satellite telemetry **$57,000**

   c. Operation and Maintenance (25 WELLS) **$177,000** – over 3 Years

   d. Equipment replacement contingency **$14,000**

6) Rural Water System Source Assessment, Diversification, and Planning – ($500,000 - Matching Funds – TSA, SRF, and Local Gov.) Understanding the capacity of rural and urban water supply systems and their vulnerability during low flow or drought conditions to meet demand.

   a. Community Low Flow Variability (Single versus multiple source water supply assessments)

   b. Water Use Inventory - Agriculture

   c. Community Drought Preparation Planning.

   d. Source Water Protection Program.

7) Demonstration on-farm water management BMPs – ($750,000 - Matching Funds – TSA, CIG, RCPP, SCS, SRF)

   a. Water trapping, harvesting, and alternative water storage BMPs.

   b. Retrofitting of tile drainage system to control water flow during dry periods

   c. Irrigation efficiency assistance, variable rate, drip and injection systems for irrigation systems, etc.

   d. Alternative water source development and efficiencies for animal agriculture water supply.

8) Infrastructure Improvements in P.L. 566 and State Owned Dams - ($200,000 - Matching Funds – TSA, SRF, and State Gov.)

   a. Providing access and pumping stations for use during drought declarations.

9) Support USDA program modifications to allow NRCS to provide technical assistance for the planning and development of new on-farm water supplies and irrigation systems.

10) Demonstration of Groundwater Recharge Facilities - (Matching Funds – TSA, CIG, RCPP, SCS)

TOTAL ESTIMATED COST FROM ALL SOURCES $3,167,500.00